ITS PROJECT APPLICATION FORM
FY 2009-2013 TIP

General Instructions: This form is to be used to request federal Congestion Mitigation and Air Quality (CMAQ) funding available through the Maricopa Association of Governments for Intelligent Transportation System (ITS) projects to be included in the FY 2009-2013 MAG Transportation Improvement Program. Currently funding is available only for **FY 2013**.

Separate application forms are available for bicycle, pedestrian, air quality, and transit projects. Freeway, street and rail transit projects will be programmed in a separate process.

This application form includes:

- Part A: Project Description and TIP Listing Information. In Part A, the applicant provides the minimum information necessary to list a project in the TIP as required by applicable federal regulations and general descriptive information necessary for MAG staff and technical committees to evaluate the project.

- Part B: Project Congestion Management System (CMS) and Congestion Mitigation Air Quality (CMAQ) Data: In Part B, the applicant provides data necessary for MAG staff to calculate CMS and CMAQ scores for projects.

- Part C: MAG Technical Committee Additional Information. This section is used to collect information requested by the MAG ITS Committee. The MAG ITS Committee is charged with evaluating and recommending ITS projects for federal funding. **PLEASE NOTE: Part C is only available electronically.** It is available at: http://www.mag.maricopa.gov/project.cms?item=413, or you can contact Leo Luo: lluo@mag.maricopa.gov, and he will send you the electronic file.

Deadlines and Transmittal Instructions: All sections should be completed and returned to MAG Offices by **5:00 p.m. September 7, 2007.** Please e-mail Judy Tadlock at MAG, jtadlock@mag.maricopa.gov this application (Part A & B). Part C is only available electronically as noted above. Please e-mail Leo Luo the completed Part C, excel file to lluo@mag.maricopa.gov. The mailing address and FAX number for the MAG offices is:

ATTN: Judy Tadlock
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003
FAX Number: (602) 254-6490

Electronic Download Information: A downloadable version of these forms in Microsoft Word is available on the MAG website at http://www.mag.maricopa.gov/project.cms?item=413. If requested, MAG staff will also provide these forms via e-mail or FAX.

MAG Contact Information: If you have any questions, please contact Stephen Tate or Eileen Yazzie at (602) 254-6300 or at state@mag.maricopa.gov.

Agency Contact Information: Please complete the following contact information for each project, so that we may contact you should we need additional information.

1.	Name of the Agency Contact for the Project Request: **City of Surprise**	1.	Telephone: **623-222-3400**
1.	E-mail **Robert.maki@surpriseaz.com**	1.	Date: **09/06/2007**

ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP
Part A: Project TIP Listing Information and Description

Section One: TIP Listing Information.

Please complete the following information for all projects. If the project is accepted for MAG federal funding, the project information provided in this section will appear in the TIP as provided by the applicant

1. Sponsoring Agency Name: **City of Surprise**	2. Year (Please check box): ☒ FY 2013
3. Project Location (The project limits if applicable): **City of Surprise, Various Locations**	
4. Type of Work (Description of the work to be performed): **Installation and integration of ITS Count Stations and DMS's on existing ITS corridors or bridged to adjacent existing corridors**	
5. Amount of Federal Funds Requested (This amount cannot exceed **70.0** percent of the total cost of the project.): **500,000**	6. Type of Federal Funds Requested (Please check box.): ☐ MAG STP ☒ CMAQ
7. Amount of Local Funds to be Used (This amount cannot be less than **30.0** percent of the total cost of the project.): **500,000**	8. Type of Local Funds to be Used: (Please check only one box.): ☐ HURF ☒ Impact Fees ☐ General Fund ☐ Bond Proceeds ☐ Sales Tax ☐ Private ☐ Property Tax ☐ Other, Please specify: _____
9. Total Cost of the Project: (This amount must equal the sum of the federal and local amounts requested): **1,000,000**	
10. Please attach a map, drawing, photograph, plans or other graphic showing the location of the project. If no graphic is available or it is not feasible to provide one, please indicate this fact in the space below.	

ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP
Part B: CMS and CMAQ Data

General Instructions: In Part B, the applicant provides data necessary for MAG staff to calculate Congestion Management System (CMS) and CMAQ scores for projects.

Section One: Congestion Management System and CMAQ Data

Please complete the following information for all street projects. The information used in this section is used to calculate CMS scores.

1. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type: **20,000 – 60,000**	2. Name of the Roadway Section Used for the ADT Estimate: **Bell Rd. Greenway, Bullard**	3. Type of Facility to be Improved (Check only one box): ☐ Arterial > 4 legs (e.g. Grand) ☒ Arterial Street ☐ Collector Street ☐ Other
4. Number of **Through** Lanes Currently on the Facility Prior to Project Completion (Do not include right, left or center turn lanes): **6**	5. Number of **Through** Lanes on the Facility After the Project is Completed (Do not include auxiliary lanes): **6**	6. Length of the Facility (in miles): **10**
7. Township Coordinate of the Midpoint of the Facility: **T3N**	8 Range Coordinate of the Midpoint of the Facility: **R1W**	9. Section Coordinate of the Midpoint of the Facility: **4 and 5**

10. If the project improves traffic signal coordination, please do the following:

a. Enter the pre-improvement (current) traffic speed of the traffic corridor: **35-45**

b. In the Table Check the Box in The Row That Best Describes the Project (Check Only One Box):

Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed
☐ Non-interconnected, pre-timed signals with old timing plan	Advanced computer-based control	25.0 percent
☐ Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent
☐ Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent
☒ Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent
☐ Interconnected, pre-timed signals with various forms of master control and various qualities of timing plans	Optimization of signal timing plans. No change in hardware	12.0 percent
☐ Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

ITS PROJECT APPLICATION FORM – FY 2009-2013 TIP
Part B: CMS and CMAQ Data

11. Other Project Information: (Check as many as are applicable):

- ☐ Includes Traffic Signal Improvements for a Single Agency
- ☐ Includes Traffic Signal Improvements that Apply to More than One Agency
- ☒ Includes FMS Improvements
- ☒ The Project Conforms to Local Land Use Plans
- ☐ The facility is on the adopted MAG Roads of Regional Significance Network
- ☐ Adds Traffic Signals that increase pedestrian crossing time for seniors

12 Management System (Please check only one box)

- ☒ Congestion Management System (CMS)
- ☐ Bridge Management System (BMS)
- ☐ Pavement Management System (PMS)
- ☐ Public Transportation Management System (PTMS)
- ☐ Safety Management System (SMS)
- ☐ Intermodal Management System (IMS)
- ☐ Other

13. Please identify the priority the agency places on this project. If for example, the agency is submitting three requests for ITS projects and this is the agency's highest priority, then a "1" should be entered. Each priority entered should be unique – e.g. no two requests for ITS projects should have the same priority.

2

Part C: MAG Technical Committee Additional Information

This section is used to collect information requested by the MAG ITS Committee. The MAG ITS Committee is charged with evaluating and recommending ITS projects for federal funding. **Part C is only available electronically. It is available at: http://www.mag.maricopa.gov/project.cms?item=413, or you can contact Leo Luo: lluo@mag.maricopa.gov, and he will send you the electronic file.**

Contact Information

Please contact Sarath Joshua or Leo Luo at (602) 254-6300 or sjoshua@mag.maricopa.gov, lluo@mag.maricopa.gov for additional information or questions.

Attachment to ITS Project Form Part A. Section 2:

1. See next page
2. This project would install additional ITS count stations, CCTV and DMS's along existing ITS corridors or directly adjacent to existing ITS corridors in key locations critical to traveler information such as around the City of Surprise Sports Complex and avenues of approach and departure.

3. This project would provide critical traveler information along existing ITS corridors and around special event areas to help provide specific traveler information while at the same time provide real time traffic volumes and counts that could be displayed for real time traveler information and analyzed for daily traffic volumes and event traffic levels. The ability to provide better traveler information during incidents and events benefits all of the traveling public and would reduce unnecessary delay time by providing accurate information on situations and best routes.

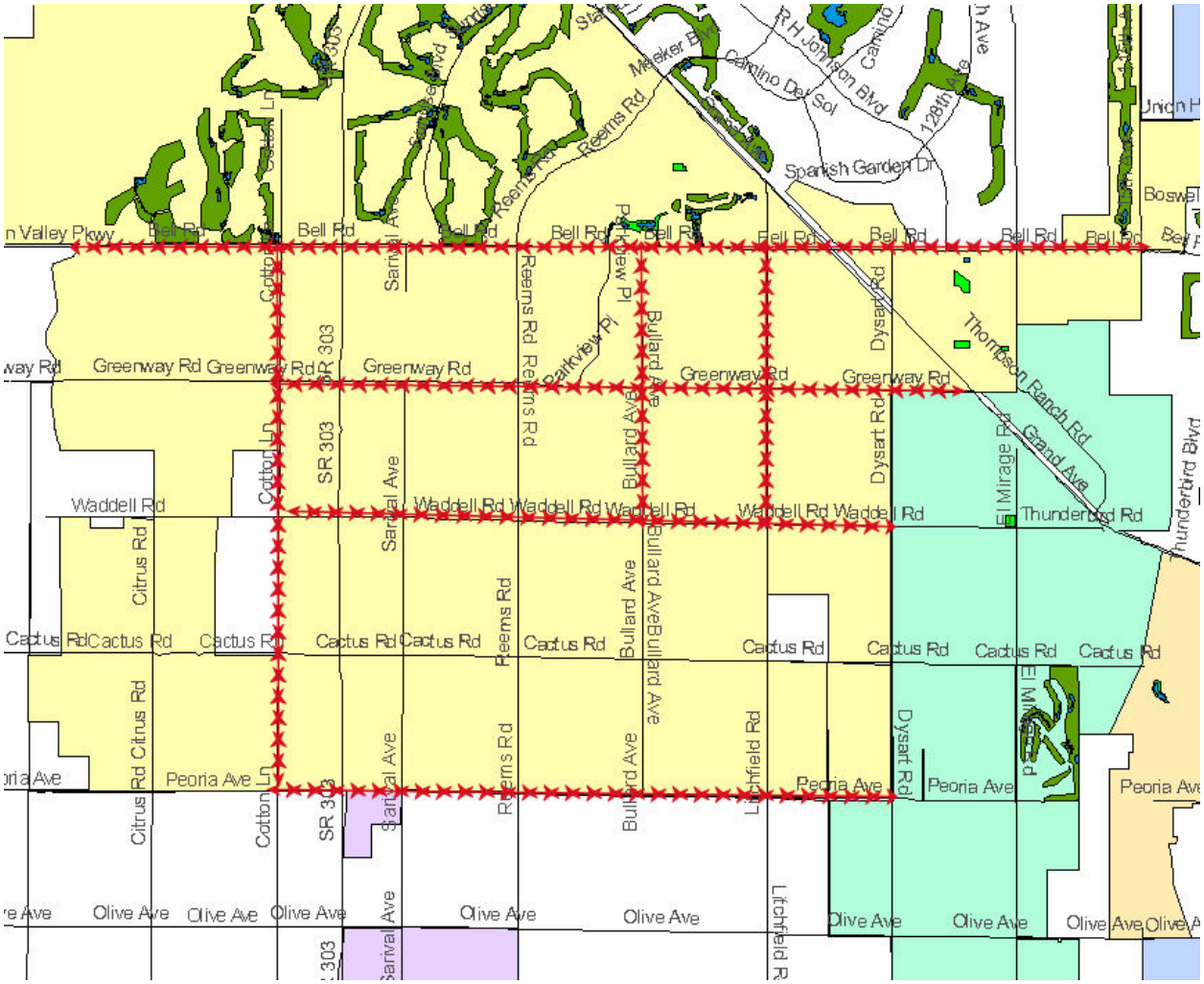
4. This system will provide video monitoring of significant traffic volumes in association with critical corridors and the sports complex. Mulit-model applications include monitoring and controlling planned bus transit systems and planned bus circulator routes.

5. The City of Surprise is home to several retirement communities including Sun City Grand and Arizona Traditions additionally there are several neighboring retirement communities on the cities bordering edges. These are communities geared to the retirement and senior life style. Through this project scope. Traveler information could be better displayed and traffic conditions would be more available for travel planning and information to assist these drivers.

6. The cost estimates are based on unit prices from the Bell Road ITS project from US-60/Grand Avenue to Loop 101, Bell Road Phase 1 with increases being considered based on inflation.

7. Surprise has budgeted funds for design and partial installation. The design will be completed in fiscal year 2012 and will be ready for the construction in the fiscal year 2013. All clearance will have been assured.

Potential corridors\Project Area



FY 2009 - 2013 TIP - Programming 2013
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency
Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV
Please use one worksheet per project, with the tab at the bottom indicating agency pri
Links to various websites are provided for additional information and help
The worksheet titled "Example" shows an example on how to enter Data in the highlig
The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems &

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Surprise
Other Partnering Agencies	None
ITS Project Title:	SUR 2013: Arterial DMS and Count Stations

B. Project Goals & Objectives

Project Goals:

Install Arterial DMS's and count stations on existing ITS corridors

Objectives:

Deploy additional DMS's with count stations along existing ITS corridors in order to provide e
coverage for travelor information and expanded automated counts along existing ITS corrido

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applica

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center,

From Subsystem	To Subsystem	Information flow
Roadside VMS\counts	TMC	Traffic Count Data
Center Subsystem-TMC	DMS	Travelor Information
Center Subsystem-TMC	Count Station	Data requests

Communications: Required communications medium for data sharing with other

From agency	To agency	data flow	Medium
Surprise	ADOT\MCDOT	Count Data	Fiber
ADOT\MCDOT	Surprise	Message posting	Fiber

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**
1. Traffic Management	Yes	1.6 Traffic Control
2. Transit Operations Support	No	
3. Interagency Data Sharing and Control	No	
4. Integrated Traveler Information	No	
5. Archived Data Management	No	
6. Incident Management	Yes	1.7 Incident Management
7. Freeway-Arterial	No	

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency shou
per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal c
counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each
(4) For multijurisdictional projects, the federal and local shares of each partnering agency mu

	Federal Cost	**Local Match (min 30%)**	**Total Cost**
Lead Agency	$500,000.00	$500,000.00	**$1,000,000.00**
Partnering Agency#1			**$0.00**
Partnering Agency#2			**$0.00**
Partnering Agency#3			**$0.00**
Total	$500,000.00	$500,000.00	$1,000,000.00
Cost percentage	**50.0%**	**50.0%**	

Note: Each participating agency should provide at least 30% local match for its share of the total cost

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement p
applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estima
process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)
Apply for ADOT project number			
Receipt of ADOT project number	Jan-2012	Yes	2
Initial DCR	Feb-2012	Yes	4
Final DCR	Mar-2012	Yes	5
30% Preliminary Plans, Cost Estimate and Report	May-2012	Yes	7
60% Preliminary Plans, Cost Estimate and Report	Jul-2012	Yes	9
Final Preliminary Plans, Cost Estimate and Report	Sep-2012	Yes	11
Environmental Clearance	Jul-2012	Yes	9
Utility Clearance	Aug-2012	Yes	10
Right-of-Way Clearance	May-2012	Yes	10
Approval of IGA	Nov-2012	Yes	14
Obligation authority of Federal funds	Dec-2012	Yes	15
Advertised Date	Feb-2013	Yes	18
Final Deployment	Aug-2013	Yes	24

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	2
Additional staff resources required for fully utilizing features added by project (FTEs)	0

Estimated current annual ITS operations & maintenance budget	$20,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	Jul-2011

Other comments:

G. Systems Engineering Analysis Requirement

Commitment to address the federal requirement for Systems Engineering Analysis:
Agency's intent to follow the process described in the 'V' diagram (See Appendix A of Arteria during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis the project's Design Concept Report. The Systems Engineering Analysis will be carried out b Systems Engineering for ITS published by FHWA in Janaury 2007. A guidelines document p office) and MAG dated August 2006 is also available (both are posted at the MAG website).

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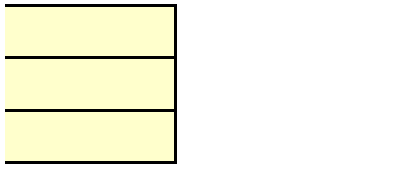
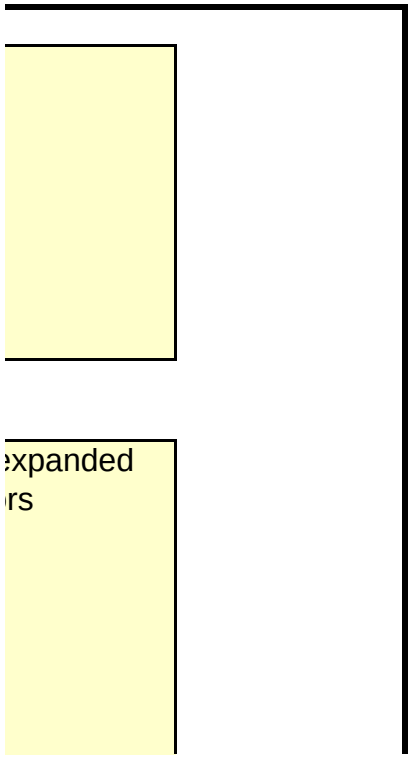
& Architecture Flows





ations

Roadside and Vehicle Subsystems)

r agencies: (if applicable)

Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Yes		
YEs		

Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
ATMS09
ATMS08

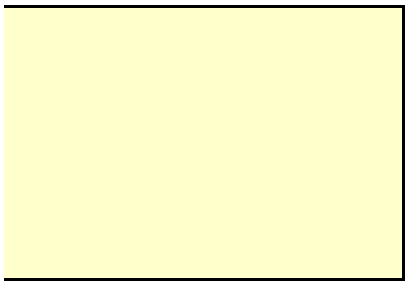
uld not exceed $1 million per program year

cost of each agency's component will not be

n project requires the 30 percent local cost match
ust be shown below.

ɔrocess. Please select
ated time for such a

Estimated Date (Enter> mm/yyyy)
Nov-2011
Jan-2012
Feb-2012
Mar-2012
May-2012
Jul-2012
Oct-2012
Aug-2012
Aug-2012
Sep-2012
Jan-2013
Jan-2013
Apr-2013
Oct-2013



l ITS Plan)

s in the scope of work for
based on the document
prepared by FHWA (AZ